HUNTINGBURG LAKE

Dubois County

2006 Fish Management Report

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EXECUTIVE SUMMARY

- A general lake survey was conducted on April 24 and 25, 2006. Water chemistry and aquatic vegetation data were also collected.

- Dissolved oxygen was sufficient for fish survival to a depth of 10 ft. Water willow was the dominant aquatic plant observed which made a 5 to 20 ft wide band around most of the lake. No submersed plants were observed.

- A total of 1,940 fish was sampled, representing 12 species and 1 hybrid, which weighed 581 lbs. Gizzard shad, white crappie, bluegill, and channel catfish were the four most abundant species by number.

- Huntingburg Lake's fishery has changed very little since the last survey in 2000. It continues to be an excellent lake for big largemouth bass, channel catfish, and hybrid walleye. The panfish fishery is comprised mostly of small, slow growing bluegill and crappie.

- The current hybrid walleye and channel catfish stocking regimes should continue.

INTRODUCTION

Huntingburg Lake is a 148-acre impoundment located approximately 1 mi west of the Town of Huntingburg on State Road 64. The lake serves as Huntingburg's secondary source of water. The watershed consists of agricultural land, golf course, forest, and a nature walkway around the lake. A concrete boat ramp and gravel parking area are located at the lake's northeast corner. There are no access fees to fish the lake. No outboard motors are allowed and shoreline fishing opportunities are good with numerous areas to fish around the lake. The fishery is regulated by the standard statewide bag and length limits.

Numerous fish stockings have occurred since 1978. The channel catfish stocking program was initiated in 1978, and currently, 3,008 channels are stocked biennially. The last channel catfish stocking was in 2005. White bass were stocked in 1979 and tiger musky were stocked in 1981. Both stockings were unsuccessful. The first successful predator stocking occurred in 1988 when 9,400 hybrid walleye or saugeye (a cross between a male sauger and female walleye) were stocked. Hybrid walleye stockings have occurred on an annual basis through 2006. Currently, a minimum of 9,400 hybrid walleye fingerlings are stocked annually.

Past fish surveys have all indicated that the fishery was composed of a small bass population dominated by large bass, a good hybrid walleye population, and a large channel catfish population. The panfish populations have consisted of small, slow growing bluegill and crappie. Common carp and gizzard shad were also abundant.

METHODS

The general survey was conducted on April 24 and 25, 2006. Fish sampling effort exceeded the standard sampling guidelines (2001), and consisted of 0.75 h of pulsed DC night electrofishing, six gill net lifts, and four trap net lifts. Two dippers collected fish stunned by the electrofishing boat. All fish were measured to the nearest 0.1 in TL. Average weights for fish by half-inch groups for Fish Management District 7 were used to estimate the weight of all fish. Scale samples were taken from a subsample of game fish for age and growth analysis.

Proportional stock density and RSD indices were used to evaluate the bluegill and white crappie populations (Anderson and Neuman 1996). The bluegill fishing potential index (BGFP) was used to evaluate the quality of the bluegill fishing (Ball and Tousignant 1996). Physical and

chemical characteristics of the water were measured according to the standard sampling guidelines. An aquatic vegetation survey was conducted on July 25 according to Pearson's guidelines (2004).

RESULTS

Dissolved oxygen was sufficient for fish survival to a depth of 10 ft. The Secchi disk reading was 2.5 ft and the conductivity was 153 µS. Water willow was the dominant aquatic plant observed which made a 5 to 20 ft wide band around most of the lake. No submersed plants were observed.

A total of 1,940 fish was sampled, representing 12 species and 1 hybrid, which weighed 581 lbs. Gizzard shad (46%), white crappie (21%), bluegill (19%), and channel catfish (4%) were the four most abundant species by number. Gizzard shad (28%), common carp (22%), channel catfish (13%), and largemouth bass (11%) were most abundant by weight. Other species sampled were hybrid walleye, black crappie, redear sunfish, longear sunfish, yellow bullhead, warmouth, and shortnose gar. These species combined for 7% of the collection by number and 14% by weight.

A total of 893 gizzard shad was sampled that weighed 163 lbs and ranged in length from 5.2 to 12.8 in. Catch rates were 725.3/electrofishing h, 53.2/gill net lift, and 7.5/trap net lift. The 2000 shad catch rates were 515.0/electrofishing h and 110.3/gill net lift.

A total of 405 white crappie was sampled that weighed 48 lbs and ranged in length from 4.7 to 11.2 in. White crappie relative abundance by number and weight nearly doubled since 2000. Their catch rates were 121.3/electrofishing h, 34.2/gill net lift, and 27.3/trap net lift. Catch rates in 2000 were 20.0/electrofishing h, 24.8/gill net lift, and 25.5/trap net lift. The proportion of white crappie that were greater than 8.0 in did not change from 2000. White crappie growth was poor and similar to 2000 results. Age-3 and age-4 white crappie averaged 6.7 and 7.4 in. The PSD and RSD10 were 3 and 1.

A total of 380 bluegill was sampled that weighed 29 lbs. Bluegill ranged in length from 1.4 to 7.3 in and only two were greater than 7.0 in. Relative abundance by number and weight was similar to 2000 results. Catch rates were 441.3/electrofishing h, 0.8/gill net lift, and 8.5/trap

net lift. The electrofishing catch doubled since 2000. Bluegill growth was poor and similar to previous survey results. Age-4 and age-5 bluegill averaged 5.l and 5.9 in. The BGFP, PSD, and RSD8 were 9, 3, and 0, and similar to 2000 results.

Sixty-seven channel catfish were sampled that weighed 73 lbs. They ranged in length from 7.0 to 20.9 in and 31% were at least 16.0 in long. The electrofishing catch rate was 9.3/h and the gill net catch rate was 10.0/lift. The 2000 gill net catch rate was 8.3/lift and 35% were at least 16.0 in long.

Fifty-one black crappie were sampled that weighed 7 lbs. They ranged in length from 4.2 to 9.1 in. Black crappie accounted for less than 3% of the collection by both number and weight. Catch rates were 13.3/electrofishing h, 3.5/gill net lift, and 5.0/trap net lift. The electrofishing and gill net catch rates more than doubled since 2000. Black crappie growth was poor as ages 2 through 5 ranged from 6.1 to 7.6 in.

Thirty-nine largemouth bass were sampled that weighed 63 lbs. They ranged in length from 4.9 to 21.4 in and 31% were at least 14 in. Bass accounted for 2% of the collection by number. Catch rates were 49.3/electrofishing h, 0.2/gill net lift, and 0.3/trap net lift. Previous electrofishing catch rates were 32.0/h (1992), 75.0/h (1997), and 73.0/h (2000). Bass growth was excellent and slightly exceeded 2000 results with age-5 and age-6 bass averaging 16.6 and 18.3 in. Only one age-1 bass was sampled.

Thirty-three hybrid walleye were sampled that weighed 53 lbs. They ranged in length from 6.3 to 25.0 in with 52% being at least 14 in and 24% being at least 18.0 in. They accounted for 2% of the sample by number and 9% by weight. The catch rates were similar to 2000 and were 17.3/electrofishing h, 3.3/gill net lift, and none were caught in trap nets. Hybrid walleye growth declined from 2000 levels with ages 3, 4, and 5 hybrid walleye averaging 12.6, 14.9, and 21.0 in.

Eighteen redear sunfish were sampled that weighed 4 lbs and ranged in length from 5.6 to 7.6 in. They accounted for less than 1% of the sample by both number and weight. No redear were sampled in 2000. Their catch rates were 17.3/electrofishing h, 0.2/gill net lift, and 1.0/trap net lift. No age-1 or age-2 redear was sampled. Growth for age-3 fish was average and declined for older ages.

DISCUSSION

Huntingburg Lake's fishery has changed very little since the last survey in 2000. It continues to be an excellent lake for big largemouth bass, channel catfish, and hybrid walleye. The panfish fishery is comprised mostly of small, slow growing bluegill and crappie.

The primary reason for the poor condition of the bluegill and crappie populations, and the low bass recruitment is the large gizzard shad population. Gizzard shad feed heavily on zooplankton throughout their lives. Zooplankton is also the first type of food eaten by small individuals of most fish species, including bluegill, crappie, and bass. Gizzard shad outcompete these other species in zooplankton predation, literally starving the bluegill, small bass, and crappie, which results in stunted panfish populations and low bass recruitment.

Channel catfish fishing opportunities are great at Huntingburg Lake as indicated by the high catch rates. According to the 1997 angler creel survey, channel catfish were popular with anglers, ranking second in the harvest (Carnahan 1998). It is recommended that the channel catfish stocking regime continue without any changes.

Hybrid walleye catch rates continue to be good. A large percentage of the sampled fish are larger than the 14-inch length limit. No changes to the annual stocking are recommended.

RECOMMENDATIONS

- Continue the current channel catfish stocking regime.
- Continue the current hybrid walleye stocking regime.

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APPENDIX